IN THE ABSTRACT

Please amend the Abstract as follows. A marked-up copy of the amended Abstract is attached hereto.

A process for displaying data on a matrix display consisting of N data lines and P selection lines at the intersections of which are situated the image points or pixels. The N data lines are grouped into P blocks of N' lines where $N = P \times N'$. Each block receives in parallel one of the P data signals which is demultiplexed on the N' lines of the said block. The scanning of the N' data lines of a block is carried out from 1 to N' or from N' to 1, alternately, according to the selection lines.

REMARKS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-4 are pending in this application, with the specification, the Abstract, and Claims 1-2 having been amended by way of the present amendment.

In the Office Action dated August 13, 2002, the drawings were objected to, guidelines for the specification format were suggested, the Abstract was objected to, the disclosure was objected to, Claims 1-2 were objected to, Claims 1-2 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lee (U.S. Patent 5,426,447) in view of Kazuhiro (JP 7-264591), and Claim 3 was indicated as allowable.

Applicants acknowledge with appreciation the indication of allowable material.

Regarding the objection to the drawings, a Letter Requesting Approval of Drawing Changes is filed herewith.

Regarding the specification format, Applicants' have incorporated the Examiner's suggested guidelines by way of the present amendment.

Regarding the objection of the Abstract as filed in Applicants Preliminary Amendment of September 5, 2002, the present amendment corrects typographical

informalities so that the Abstract is consistent with Applicants' specification. Applicants note, however, that Applicants' specification[1] states N = P x N', not N = P' x N' as asserted in the pending Office Action.[2] Thus, all occurrences of P' have been changed to P throughout the abstract and claims.

Regarding the objection to the specification, the present amendment corrects the typographical error in the manner suggested by the Examiner.[3]

Regarding the objection to Claim 1, the present amendment corrects typographical informalities so that Claim 1 is consistent with Applicants' specification. Applicants note, however, that for the reasons discussed above regarding the Abstract, all occurrences of P' in Claim 1 have been changed to P.

Regarding the objection to Claim 2, the present amendment adds further clarifying details as suggested by the Examiner.[4]

Briefly recapitulating, the present invention is directed to a process for displaying data on a matrix display having N data lines and P selection lines. At the intersections of these lines are image points or pixels in which the N data lines are grouped into P blocks of N' data lines (N = P x N'). Each block receives in parallel one of the P data signals which is demultiplexed on the N' lines of the block. The scanning of the N' data lines of a block is carried out from 1 to N' and from N' to 1, alternately according to the selection lines. This allows for a display without introducing a DC error of several tens of mV between the first column sampled in the block and the last, as is common in conventional systems.[5]

Lee discloses a method for demultiplexing Y data selection signals over X groups of Y data lines. In particular, Lee discloses pixels located at the intersection of data lines and

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[1] Specification, page 3, lines 27-28.
[2] Office Action, paragraph 4.
[3] Id, paragraph 5.
[4] Id, paragraph 7.
[5] Specification, page 3, lines 11-21.

row lines.[6] In Lee, the number of data lines is equal to the number of groups multiplied by the number of data lines/group.[7] As noted in the Office Action,[8] Lee does not disclose alternately scanning of the N' data lines of a block from 1 to N' and from N' to 1 according to the selection lines, as recited in Applicants' Claim 1.

Kazuhiro, on the other hand, discloses a process for reading blocks of data from an original image for further compression and transmission. Applicants respectfully submit that Kazuhiro also does not disclose alternately scanning of the N' data lines of a block...from 1 to N' and from N' to 1 according to the selection lines as recited in Applicants' Claim 1. As noted in the Office Action,[9] the scanning process of Kazuhiro is restricted to reading by way of a continuous, conventional zigzag scanning path.[10] Thus, unlike Applicants' present invention, Kazuhiro is restricted to only scanning an individual data line whereas the present invention permits scanning of blocks of multiple data lines. Furthermore, the scanning technique of Kazuhiro is not configured to correspond to the selection lines. There is no flexibility in the scan pattern of Kazuhiro relative to a correspondence with the selection lines as is recited in Applicants' Claim 1.

Therefore, Applicants respectfully submit that no combination of Lee and Kazuhiro teach all the elements of the inventions described by Applicants' independent Claim 1. Thus, Applicants submit the invention defined by Claim 1, and all claims depending therefrom, is

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[6] Lee, column 5, lines 31-37 and column 6, lines 33-41.
[7] Id., column 6, lines 48-60.
[8] Office Action, page 6, lines 3-4.
[9] Id., page 6, lines 5-9.
[10] Kazuhiro, paragraph 0022, "...the subject-copy image data scan method of carrying out the scan...circles to the specific direction and its opposite direction by turns.... [As an] adjoining block can be read continuously, it is between contiguity blocks, and since the difference of the subject-copy image data is small, the compression efficiency in the case of coding...can be raised."

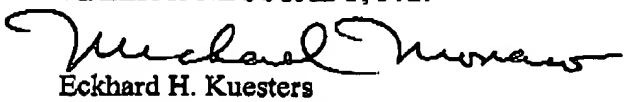
not rendered obvious by the asserted prior art for at least the reasons stated above and therefore the rejection does not meet the requirements of MPEP § 2142.[11]

Furthermore, there is no teaching or suggestion in either reference of the desirability for combining the compression scanning techniques of Kazuhiro with data display techniques of Lee. Applicants also note that Kazuhiro is directed to a data compression and transmission scheme while Lee is directed to a display method and apparatus. Therefore, there is no implicit motivation to combine the references and, thus, the rejection also does not meet the requirements of MPEP 2143.01.[12] On the contrary, it is only through an impermissible hindsight reconstruction of Applicants' invention that the rejection can be understood.

Accordingly, in view of the present amendment and in light of the previous discussion, it is respectfully submitted that the application is believed in condition for allowance and early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



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[11] MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

[12] MPEP 2143.01, *Suggestion or Motivation to Modify the References*, "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge of one of ordinary skill in the art."

Docket No.: 229291US6X PCT

Marked-Up Copy
Serial No: 09/623,407
Amendment Filed on:

IN THE SPECIFICATION

Please amend the specification as follows:

Page 1, prior to line 1, please delete the existing title and replace with the following:

[METHOD FOR DISPLAY MATRIX DISPLAY SCREEN WITH ALTERNATING SCANNING CONTROL IN ADJACENT GROUPS OF COLOUMS]

TITLE OF INVENTION

METHOD AND APPARATUS FOR DISPLAYING DATA ON A MATRIX DISPLAY WITH AN ALTERNATING ORDER OF SCANNING IN ADJACENT GROUPS OF COLUMNS

FIELD OF INVENTION

Page 1, after line 11, please insert:

BACKGROUND OF INVENTION

Page 3, after line 21, please insert:

SUMMARY OF INVENTION

Page 4, after line 10, please insert:

BRIEF DESCRIPTION OF THE DRAWINGS

Page 4, after line 24, please insert:

DETAILED DESCRIPTION

Paragraph on page 7, lines 20-23 is amended as follows:

This cue at the output of the counter DW is dispatched to a level shifting circuit 17 and returned to the counter modulo N'~~-1~~815.

IN THE CLAIMS

Claims 1-2 are amended as follows:

1. (Twice Amended) Process for displaying data on a matrix display having N data lines and P selection lines at the intersections of which are situated the image points or pixels, and in which the N data lines are grouped into ~~P'~~ P blocks of N' data lines each (N = P x N'), each block receiving in parallel one of the ~~P'~~ P data signals which is demultiplexed on the N' lines of said block, wherein, alternately, according to the selection lines, the scanning of the N' data lines of a block is carried out from 1 to N' and from N' to 1.

2. (Twice Amended) Process according to Claim 1, wherein the scan from 1 to N' then from N' to 1 is carried out every second selection line, the scan being carried out in a first direction for a first selection line and in a second direction for a succeeding selection line.

IN THE ABSTRACT

Please amend the abstract as follow:

~~The present invention relates to a~~ A process for displaying data on a matrix display consisting of N data lines and P selection lines at the intersections of which are situated the image points or pixels. The N data lines are grouped into P blocks of N' lines where N = P × N'. Each block receives in parallel one of the ~~P'~~ P data signals which is demultiplexed on the N' lines of the said block. The scanning of the N' data lines of a block is carried out from 1 to N' or from N' to 1, alternately, according to the selection lines.